

CLAIMS

1. An oligonucleotide that includes a sequence selected from the group
5 consisting of SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID
NO:6, SEQ ID NO:7 and their complementary sequences.

2. The oligonucleotide according to claim 1, which consists of SEQ ID
10 NO: 2 or its complementary sequence.

3. The oligonucleotide according to claim 1, which consists of SEQ ID
NO: 3, or its complementary sequence.

4. The oligonucleotide according to claim 1, which consists of SEQ ID
15 NO: 4, or its complementary sequence.

5. The oligonucleotide according to claim 1, which consists of SEQ ID
NO: 5, or its complementary sequence.

20 6. The oligonucleotide according to claim 1, which consists of SEQ ID
NO: 6, or its complementary sequence.

7. The oligonucleotide according to claim 1, which consists of SEQ ID
25 NO: 7, or its complementary sequence.

8. Use of an oligonucleotide as defined in any of claims 1 to 7, as a probe
or primer, for hybridizing with and optionally amplifying a nucleic acid from a hepatitis
B virus (HBV).

30 9. Use of an oligonucleotide that includes a sequence selected from the
group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and
their complementary sequence, as a probe for hybridizing with a nucleic acid from
HBV.

10. The use according to claim 9, wherein said oligonucleotide consists of a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence.

5 11. The use according to claim 9, wherein said oligonucleotide includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence and carries a fluorophore moiety at one terminus, and a quencher moiety at the other terminus.

10 12. The use according to claim 11, wherein said oligonucleotide consists of a sequence selected from the group consisting of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 and SEQ ID NO:15, and carries a fluorophore moiety at one terminus, and a quencher moiety at the other terminus.

15 13. A set of oligonucleotides consisting of an oligonucleotide that includes SEQ ID NO:2, and at least an oligonucleotide selected from the group consisting of an oligonucleotide that includes SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6 and SEQ ID NO:7.

20 14. A set of oligonucleotides according to claim 13, which consists of:
(i) an oligonucleotide that includes SEQ ID NO:2, and an oligonucleotide that includes SEQ ID NO:3;

(ii) an oligonucleotide that includes SEQ ID NO:2, and an oligonucleotide that includes SEQ ID NO:4;

25 (iii) an oligonucleotide that includes SEQ ID NO:2, and an oligonucleotide that includes SEQ ID NO:5;

(iv) an oligonucleotide that includes SEQ ID NO:2, and an oligonucleotide that includes SEQ ID NO:6;

30 (v) an oligonucleotide that includes SEQ ID NO:2, and an oligonucleotide that includes SEQ ID NO:7;

vi) an oligonucleotide that includes SEQ ID NO:2, an oligonucleotide that includes SEQ ID NO:4 and an oligonucleotide that includes SEQ ID NO:5; and

(vii) an oligonucleotide that includes SEQ ID NO:2, an oligonucleotide that includes SEQ ID NO:6 and an oligonucleotide that includes SEQ ID NO:7.

15. A set of oligonucleotides comprising:

a) a set of oligonucleotides according to claim 13 or 14; and

5 b) an oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence.

16. A set of oligonucleotides according to claim 15, that comprises:

a) a set of oligonucleotides according to claim 13 or 14; and

10 b) an oligonucleotide that consists of a sequence selected from the group consisting of SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 and SEQ ID NO:15, and carries a fluorophore moiety at one terminus, and a quencher moiety at the other terminus.

15 17. A method for specifically detecting a HBV by amplification in a biological sample, which method comprises the steps consisting of:

a) contacting a set of oligonucleotides according to claim 13 or 14 with a biological sample or nucleic acid preparation obtained from a biological sample, under conditions suitable for the oligonucleotides to hybridize to a HBV nucleic acid present in the sample;

20 b) amplifying said HBV nucleic acid using said oligonucleotides as primers;

c) detecting the amplification product, indicative of the presence of a HBV in the biological sample.

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18. The method according to claim 17, wherein HBV nucleic acid is amplified by polymerase chain reaction.

30 19. The method according to claim 17 or 18, wherein the detection of said amplification product is performed by using an oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence, and that is detectably labelled, as a probe.

20. The method according to claim 19, wherein said oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence, and carries a fluorophore moiety at one terminus, and a quencher moiety at the other terminus.

21. The method according to claim 19 or 20, wherein said oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence, is SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15.

22. A kit for amplifying HBV in a biological sample, which kit comprises :
- at least a set of oligonucleotides according to claim 13 or 14, useful as primers;
- means for amplifying a HBV nucleic acid.

23. The kit according to claim 22, which further comprises means for the detection of the amplified product.

24. The kit according to claims 22 or 23, wherein the means for amplifying HBV nucleic acid are means for amplification by Polymerase Chain Reaction.

25. The kit according to any of claims 22 to 24, which comprises an oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence, detectably labelled and useful as a probe.

26. The kit according to claim 25, wherein said oligonucleotide that includes a sequence selected from the group consisting of SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, and their complementary sequence, is SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14 or SEQ ID NO:15.